CANNONDESIGN

CIRM RFA 07-03
Application # FA1-00614-1
Functionality Score: B
Value Score: B+

Overall, this was an intriguing and innovative proposal. This is a special built facility with the cores to be provided within the SCIF including fabrication of state-of-the-art 'Lab-on-a-chip' microdevices for single cell analysis. The facility will include a P100 clean room and a P1000 clean room for microfabrication of the chips. Adjacent cores will include cell culture facilities, fluorescence microscopy, flow cytometry and lab support areas. Since it is a purpose built facility there is little that can be done to provide flexibility other than configuring for ease of future expansion.

Boston
New York
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St. Louis
Calgary
Vancouver
Victoria
San Francisco
Los Angeles
Shanghai

Functionality

Until a more detailed design is completed it is not clear how the actual clean room facilities will be configured and what space is truly available for research. Typically the usable area of a clean room requires an equal amount of mechanical space to support the space. Airlocks, gowning areas, and dirty utility zones for microfabrication equipment all eat into the total square footage.

The budget sheet did not indicate the cost of the micro-fabrication tooling which is significant and appeared low for the clean room assembly with the specialty piping systems and vibration isolation slabs.

Because of the unique nature of this facility, the off-campus location should not be a problem.

Value

	00614-1	Special Prgm	Range
The Net/Gross sf ratio of the overall building	66.6%	65%	62.6% - 66.6%
The Project cost / gsf	$860	$568	$342 - $860
The asf of Lab + Lab Support + PI Office space / PI	2,020	1,035	253 – 2,521
The ratio of Lab to Lab Support	1:0.66	1:0.48	1:.036 – 1:0.66
The asf Core / PI	275	524	275 - 664
The group 2 equipment budget / PI	$57,250	$226,916	$3,310 - $57,250
CIRM funds / PI	$641,100	$1,219,756	$.641M - $1.574M

This proposal is unique among all the applicants and does not relate well to the metrics in the table above for the special programs. The concept is to provide a stem cell instrumentation foundry both as a research tool and as a shared resource to outside users. A nano-fabrication facility is expensive and it makes sense to build only one and share its unique function and user expertise. The proposed facility is a TI build-out in an existing building utilizing much of the infrastructure resulting in reduced shell and systems cost.

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